

Regional HIV/AIDS Epidemiologic Profile of Worcester County, Massachusetts: 2012

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases who were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2012, this resulted in the removal of 2,924 HIV/AIDS cases, of which 808 have died and 2,116 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2011: Worcester County, Massachusetts²

	N	%
People Living with HIV/AIDS	1,568	60%
People Reported with HIV or AIDS who are Deceased	1,048	40%
Total Number of People Reported with HIV Infection or AIDS	2,616	100%

¹ Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 2. Average annual rate of HIV infection diagnosis from 2008 to 2010 and HIV/AIDS prevalence rate on 12/31/11¹: Worcester County, Massachusetts²

Average annual HIV diagnosis rate from 2008–2010	Average rate per 100,000	Average annual number of HIV diagnoses
Worcester County, MA	7.1	56.3
Massachusetts Total	10.3	664.7

HIV/AIDS prevalence rate on 12/31/11	Rate per 100,000	Number of people living with HIV/AIDS
Worcester County, MA	196.4	1,568
Massachusetts Total	277.5	18,170

¹ The denominators for rate calculations are from the 2010 Census, Summary File 1.

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2001–2010, Worcester County, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2001	1,154	38	65
2002	1,223	39	110
2003	1,272	35	84
2004	1,311	42	81
2005	1,345	40	71
2006	1,397	29	80
2007	1,426	29	58
2008	1,452	29	55
2009	1,484	25	57
2010	1,521	20	57

¹ Number of people living with HIV/AIDS on 12/31 of each year

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

⁴ Values less than five are suppressed for populations less than 50,000 or for unknown values for the assurance of confidentiality. Additional values may be suppressed to prevent back calculation.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 4. People diagnosed with HIV infection from 2008–2010¹ and people living with HIV/AIDS on December 31, 2011 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Worcester County, Massachusetts²

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	102	60%	960	61%
Female	67	40%	608	39%
Place of Birth:	N	%	N	%
US	89	53%	945	60%
Puerto Rico/US Dependency ³	25	15%	305	19%
Non-US	55	33%	318	20%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	56	33%	662	42%
Black (non-Hispanic)	64	38%	380	24%
Hispanic/Latino	44	26%	502	32%
Asian/Pacific Islander	5	3%	21	1%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	45	27%	361	23%
Injection Drug Use (IDU)	21	12%	463	30%
MSM/IDU	-- ⁷	-- ⁷	49	3%
Heterosexual Sex	32	19%	300	19%
Other	-- ⁷	-- ⁷	45	3%
Total Undetermined	62	37%	350	22%
• Presumed Heterosexual Sex ⁴	26	15%	165	11%
• Undetermined ⁵	36	21%	185	12%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2011	
Under 13	3	2%	2	<1%
13 to 19	4	2%	15	1%
20 to 24	19	11%	26	2%
25 to 29	17	10%	43	3%
30 to 34	18	11%	81	5%
35 to 39	18	11%	124	8%
40 to 44	28	17%	212	14%
45 to 49	24	14%	309	20%
50 to 54	21	12%	321	20%
55 to 59	8	5%	229	15%
60+	9	5%	206	13%
Total⁶	169	100%	1,568	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁵ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁶ Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁷ Values less than five are suppressed for populations less than 50,000 or for unknown values. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 5. People living with HIV/AIDS on December 31, 2011 by gender and race/ethnicity: Worcester County, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	478	50%	184	30%
Black (non-Hispanic)	183	19%	197	32%
Hispanic/Latino	280	29%	222	37%
Total²	960	100%	608	100%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Total includes Asian/Pacific Islander, American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 6. People living with HIV/AIDS on December 31, 2011 by gender and exposure mode: Worcester County, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	361	38%	N/A	N/A
Injection drug use (IDU)	284	30%	179	29%
MSM/IDU	49	5%	N/A	N/A
Heterosexual sex	76	8%	224	37%
Other	25	3%	20	3%
Total Undetermined	165	17%	185	30%
• Presumed heterosexual sex ²	N/A	N/A	165	27%
• Undetermined ³	165	17%	20	3%
Total	960	100%	608	100%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Includes female sex with male of unknown HIV status or risk. This category is limited to females.

³ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Worcester County, Massachusetts¹, 2001–2010²

	Male		Female		Total
	N	%	N	%	
2001	47	72%	18	28%	65
2002	64	58%	46	42%	110
2003	45	54%	39	46%	84
2004	45	56%	36	44%	81
2005	49	69%	22	31%	71
2006	50	63%	30	38%	80
2007	36	62%	22	38%	58
2008	31	56%	24	44%	55
2009	38	67%	19	33%	57
2010	33	58%	24	42%	57

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Worcester County, Massachusetts¹, 2001–2010²

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total ³
	N	%	N	%	N	%	N
2001	29	45%	14	22%	19	29%	65
2002	39	35%	36	33%	34	31%	110
2003	34	40%	27	32%	20	24%	84
2004	33	41%	24	30%	24	30%	81
2005	32	45%	21	30%	16	23%	71
2006	26	33%	29	36%	22	28%	80
2007	23	40%	21	36%	13	22%	58
2008	21	38%	17	31%	15	27%	55
2009	19	33%	20	35%	16	28%	57
2010	16	28%	27	47%	13	23%	57

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Worcester County, Massachusetts¹, 2001–2010²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
2001	33	51%	12	18%	20	31%	65
2002	56	51%	16	15%	38	35%	110
2003	48	57%	11	13%	25	30%	84
2004	41	51%	15	19%	25	31%	81
2005	37	52%	11	15%	23	32%	71
2006	40	50%	12	15%	28	35%	80
2007	29	50%	7	12%	22	38%	58
2008	28	51%	12	22%	15	27%	55
2009	35	61%	7	12%	15	26%	57
2010	26	46%	6	11%	25	44%	57

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Worcester County, Massachusetts¹, 2001–2010²

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ³		Undeter- mined ⁴		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2001	15	23%	18	28%	-- ⁵	-- ⁵	16	25%	-- ⁵	-- ⁵	7	11%	8	12%	65
2002	19	17%	25	23%	-- ⁵	-- ⁵	18	16%	-- ⁵	-- ⁵	19	17%	24	22%	110
2003	19	23%	15	18%	-- ⁵	-- ⁵	11	13%	-- ⁵	-- ⁵	17	20%	15	18%	84
2004	15	19%	19	23%	-- ⁵	-- ⁵	21	26%	-- ⁵	-- ⁵	15	19%	9	11%	81
2005	23	32%	18	25%	0	0%	6	8%	0	0%	12	17%	12	17%	71
2006	23	29%	11	14%	-- ⁵	-- ⁵	12	15%	-- ⁵	-- ⁵	17	21%	16	20%	80
2007	20	34%	8	14%	-- ⁵	-- ⁵	9	16%	-- ⁵	-- ⁵	10	17%	10	17%	58
2008	13	24%	12	22%	-- ⁵	-- ⁵	11	20%	-- ⁵	-- ⁵	7	13%	10	18%	55
2009	20	35%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	11	19%	-- ⁵	-- ⁵	6	11%	11	19%	57
2010	12	21%	5	9%	-- ⁵	-- ⁵	10	18%	-- ⁵	-- ⁵	13	23%	15	26%	57

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁴ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁵ Values less than five are suppressed for populations less than 50,000 or for unknown values. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Worcester County, Massachusetts¹, 2001–2010²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2001	26	65	40%
2002	38	110	35%
2003	30	84	36%
2004	30	81	37%
2005	30	71	42%
2006	30	80	38%
2007	23	58	40%
2008	27	55	49%
2009	20	57	35%
2010	20	57	35%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Worcester County, Massachusetts,¹ 2008–2010²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male	44	102	43%
Female	23	67	34%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	23	56	41%
Black (non-Hispanic)	29	64	45%
Hispanic/Latino	12	44	27%
Place of Birth:	N	N	%
US	39	89	44%
Puerto Rico/US Dependencies ³	8	25	32%
Non-US	20	55	36%
Total⁴	67	169	40%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁴ Total includes Asian/Pacific Islander, American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12